

**ABSTRACT**

The present invention aims at providing a photodetector which can secure both a good S/N ratio and a high speed. With a photodetector 1, ( $K \times M \times N$ ) photodiodes  $PD_{k,m,n}$  are arranged in  $M$  rows and ( $K \times N$ ) columns in a photodetection unit 10, and processes (electric charge accumulation, CDS, filtering, and A/D conversion) regarding each of the ( $K \times N$ ) photodiodes  $PD_{k,m,n}$  ( $k = 1$  to  $K$ ,  $n = 1$  to  $N$ ) of each row are carried out successively at each time  $T$ . Meanwhile, each of an electric charge accumulation operation in an integrating circuit  $20_{m,n}$ , a CDS operation in a CDS circuit  $30_{m,n}$ , a filtering operation in a filter circuit  $40_{m,n}$ , and an A/D conversion operation in an A/D converter  $50_{m,n}$  is carried out at each time ( $N \times T$ ).